Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at http://about.jstor.org/participate-jstor/individuals/early-journal-content.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

WHOLESALE DESTRUCTION OF ACARI BY A FUNGUS.

By C. M. Vorce, Cleveland, O.

In March last, while passing a heap of stable manure, I kicked over a piece of board lying on the heap, and on glancing at the uncovered spot, my attention was attracted by a sort of mealy appearance, as if very fine meal had been sprinkled on the surface of the manure. Supposing this to be the spore-cysts of a fungus, I secured a quantity of the supposed fungus *in situ*. Under a pocket lens the surface of the material was seen to be thickly studded with minute, whitish, globular bodies, very much like, but somewhat larger than, the capsules of a mucor; no mycelium could be seen. On placing some of the material under the microscope, with 2-in. objective, the globular bodies were seen to be filled with spores, and closely resembled the spore capsules of mucor, save in being much larger, but still no mycelium was seen on the surface of the oat-hulls, fragments of straw, etc., to which the globular bodies adhered. But on picking off with a mounted bristle some of the globes, and examining them separately on a slide, they were found to have legs, and to be in fact minute hexapod acari, dead, and distended by the spores of some (Sphæriceous?) fungus, which had completely replaced the natural contents of the body. With great difficulty a view of the insect *in situ* was obtained, and showed it to be in a stiff, straddling and apparently unnatural position, nearly head downward, so that the head and legs were concealed from above by the swollen body. On crushing the detached specimens in water, the contents of the bodies seemed to be matted together, but many free spores floated out, and were found to be globular and hyaline, and of an average diameter of about .001 inch.

This would seem to be a different fungus from the *Sporendonema musci*, which destroys the housefly; but, as all the specimens not immediately examined were soon afterwards destroyed by accident, this probably cannot be positively determined until more specimens are found.

Many insects are known to be attacked by various species of fungi; and beetles, moths, flies, locusts, and larvæ of various kinds have been recorded as the victims, but I have never seen any record of any insect smaller than the mosquito being thus affected; and to find these minute acari thus destroyed by such a vegetable parasite is, to me at least, a new revelation.

The number of the insects seen on the spot on which the piece of board had lain was thousands at the least, and doubtless they were but a few of the whole number in the manure pile.

How the insect became infested with the fungus is an interesting problem. In the case of larger insects the natural openings of the body are large enough to allow of the entrance of mycelial threads or the passage of spores, but in the case in hand the spores are much larger than any opening of the body; and the only trace seen of any threads of mycelium or of any fungoid structure, beside the spores, were a few excessively minute, acicular, glassy fragments on which the spores might have been borne.